

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (original) A device for removing uremic toxins in a dialysis procedure comprising:

a body having an inlet and an outlet and defining an interior, the interior including a layer comprising urease, a layer comprising zirconium oxide, a layer comprising zirconium phosphate, and a layer comprising carbon; and

the device being so constructed and arranged so that a fluid entering the device contacts the zirconium phosphate layer upon entering the device before contacting the urease or the zirconium oxide layer.

Claim 2. (original) The device of claim 1 wherein the zirconium oxide has been modified to remove the nitrate ion.

Claim 3. (original) The device of claim 1 wherein the zirconium oxide is in hydroxyl form.

Claim 4. (original) The device of claim 1 wherein the carbon layer is located in juxtaposition to the outlet.

Claim 5. (original) The device of claim 4 wherein the fluid flows through a layer of zirconium oxide before entering the carbon layer.

Claim 6. (original) The device of claim 1 wherein the zirconium phosphate has a pH of approximately 2 to about 8.

Claim 7. (original) The device of claim 1 wherein the zirconium oxide has a pH of approximately 6 to about 13.

Claim 8. (original) The device of claim 1 including two separate layers of zirconium phosphate.

Claim 9. (original) The device of claim 1 including two separate layers of zirconium oxide.

Claim 10. (original) The device of claim 1 including an open header at each of the inlet and outlet end of the device.

Claim 11. (original) The device of claim 1 including an opening for venting a gas to the atmosphere located at the outlet end.

Claims 12-58. (canceled)

Claim 59. (currently amended) A device for removing uremic toxins in a dialysis procedure comprising:

a body having an inlet and an outlet and defining an interior, the interior including a layer comprising a modified urease selected from the group consisting of cross-linked enzyme crystals of urease, a blend of urease and zirconium oxide, and alumina-stabilized urease, a layer comprising zirconium oxide, a layer comprising zirconium phosphate, and a layer comprising carbon; and

the device being so constructed and arranged so that a fluid entering the device contacts the zirconium phosphate layer upon entering the device before contacting the modified urease or the zirconium oxide layer.

Claim 60. (previously presented) The device of claim 59 wherein a fluid entering the device contacts the zirconium phosphate layer upon entering the device before contacting the modified urease or the zirconium oxide layer.

Claim 61. (previously presented) The device of claim 59 wherein the body further comprises a rough interior surface, the rough interior surface preventing fluid flow along the interior surface.

Claim 62. (currently amended) ~~The device of claim 59 A device for removing uremic toxins in a dialysis procedure comprising:~~

a body having an inlet and an outlet and defining an interior, the interior including a layer comprising a modified urease selected from the group consisting of cross-linked enzyme crystals of urease, a blend of urease and zirconium oxide, and alumina-stabilized urease, a layer comprising zirconium oxide, a layer comprising zirconium phosphate, and a layer comprising carbon wherein the modified urease is an irradiated modified urease.

Claim 63. (currently amended) ~~The device of claim 59 A device for removing uremic toxins in a dialysis procedure comprising:~~

a body having an inlet and an outlet and defining an interior, the interior including a layer comprising a modified urease selected from the group consisting of cross-linked enzyme crystals of urease, a blend of urease and zirconium oxide, and alumina-stabilized urease, a layer comprising zirconium oxide, a layer comprising zirconium phosphate, and a layer comprising carbon wherein the modified urease is a blend of urease and zirconium oxide, the urease present from about 0.1% to about 0.2% by weight of the blend.